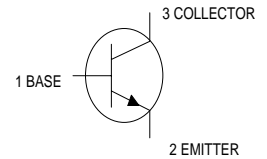
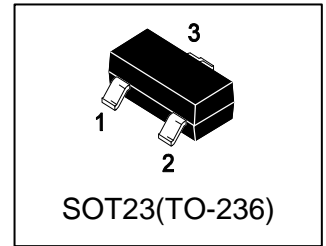


LMBT4401LT1G

S-LMBT4401LT1G

General Purpose Transistors NPN Silicon



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|--------------|---------|-----------------|
| LMBT4401LT1G | 2X | 3000/Tape&Reel |
| LMBT4401LT3G | 2X | 10000/Tape&Reel |

3. MAXIMUM RATINGS(Ta = 25°C)

| Parameter | Symbol | Limits | Unit |
|--------------------------------|------------------|--------|------|
| Collector–Emitter Voltage | V _{CEO} | 40 | V |
| Collector–Base Voltage | V _{CBO} | 60 | V |
| Emitter–Base Voltage | V _{EBO} | 6 | V |
| Collector Current — Continuous | I _C | 600 | mA |
| Collector Current — Peak | I _{CM} | 900 | mA |

4. THERMAL CHARACTERISTICS

| Parameter | Symbol | Limits | Unit |
|---|-----------------------------------|------------|-------------|
| Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C | PD | 225 1.8 | mW mW/°C |
| Thermal Resistance, Junction–to–Ambient(Note 1) | R _{θJA} | 556 | °C/W |
| Junction and Storage temperature | T _J , T _{stg} | -55~+150 | °C |

1. FR-5 = 1.0×0.75×0.062 in.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

| Characteristic | Symbol | Min. | Typ. | Max. | Unit |
|--|----------|------|------|------|------|
| Collector–Emitter Breakdown Voltage (IC = 1.0 mA, IB = 0) | VBR(CEO) | 40 | - | - | V |
| Collector–Base Breakdown Voltage (IC = 0.1 mA, IE = 0) | VBR(CBO) | 60 | - | - | V |
| Emitter–Base Breakdown Voltage (IE = 0.1 mA, IC = 0) | VBR(EBO) | 6 | - | - | V |
| Collector Cutoff Current (VCE = 35 V, VEB = 0.4V) | ICEX | - | - | 0.1 | μA |
| Base Cutoff Current (VCE = 35 V, VEB = 0.4V) | IBEV | - | - | 0.1 | μA |
| Collector Cutoff Current (VCB =60V , IE =0) | ICBO | - | - | 100 | nA |
| Emitter-Base cut-off current (IC = 0, VEB=5.0V) | IEBO | - | - | 100 | nA |
| Collector-Emitter cutoff Current (VCE = 40V, IB=0) | ICEO | - | - | 10 | μA |

ON CHARACTERISTICS (Note 2.)

| | | | | | |
|---|----------|------|---|------|---|
| DC Current Gain (IC = 0.1 mA, VCE = 1.0 V) | HFE | 20 | - | - | |
| (IC = 1.0 mA, VCE = 1.0 V) | | 40 | - | - | |
| (IC = 10 mA, VCE = 1.0 V) | | 80 | - | - | |
| (IC = 150 mA, VCE = 1.0 V) | | 100 | - | 300 | |
| (IC = 500 mA, VCE = 2.0 V) | | 40 | - | - | |
| Collector–Emitter Saturation Voltage (IC = 150 mA, IB = 15 mA) | VCE(sat) | - | - | 0.4 | V |
| (IC = 500 mA, IB = 50 mA) | | - | - | 0.75 | |
| Base–Emitter Saturation Voltage (IC = 150 mA, IB = 15 mA) | VBE(sat) | 0.75 | - | 0.95 | V |
| (IC = 500 mA, IB = 50 mA) | | - | - | 1.2 | |

SMALL–SIGNAL CHARACTERISTICS

| | | | | | |
|---|------|-----|---|-----|-----|
| Current–Gain — Bandwidth Product (IC = 20mA, VCE= 20V, f = 100MHz) | fT | 250 | - | - | MHz |
| Output Capacitance (VCB = 5.0 V, IE = 0, f = 1.0 MHz) | Cobo | - | - | 6.5 | pF |
| Input Capacitance (VEB = 0.5 V, IC = 0, f = 1.0 MHz) | Cibo | - | - | 30 | pF |

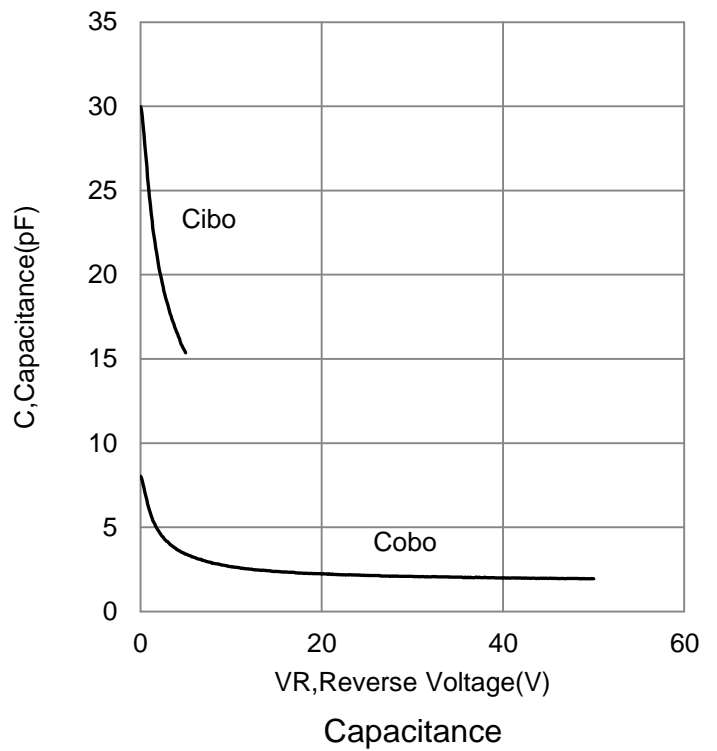
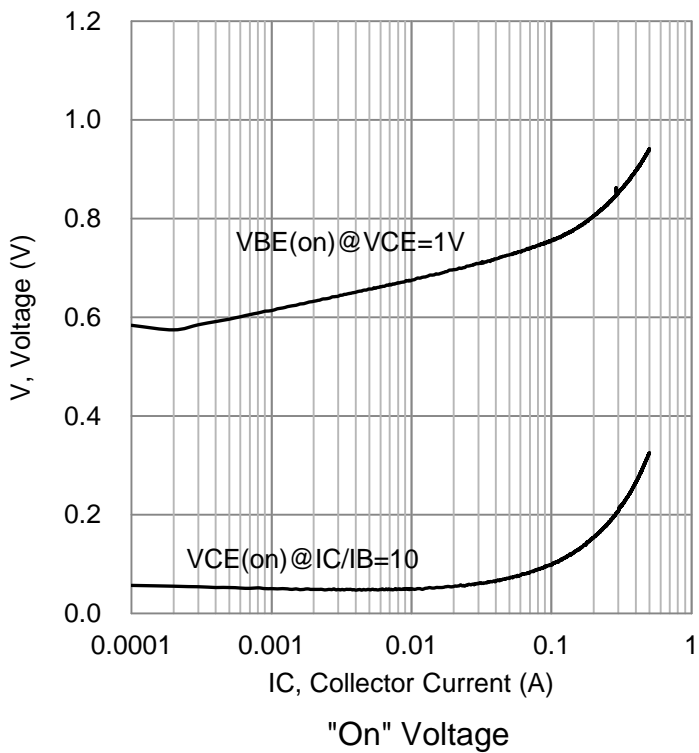
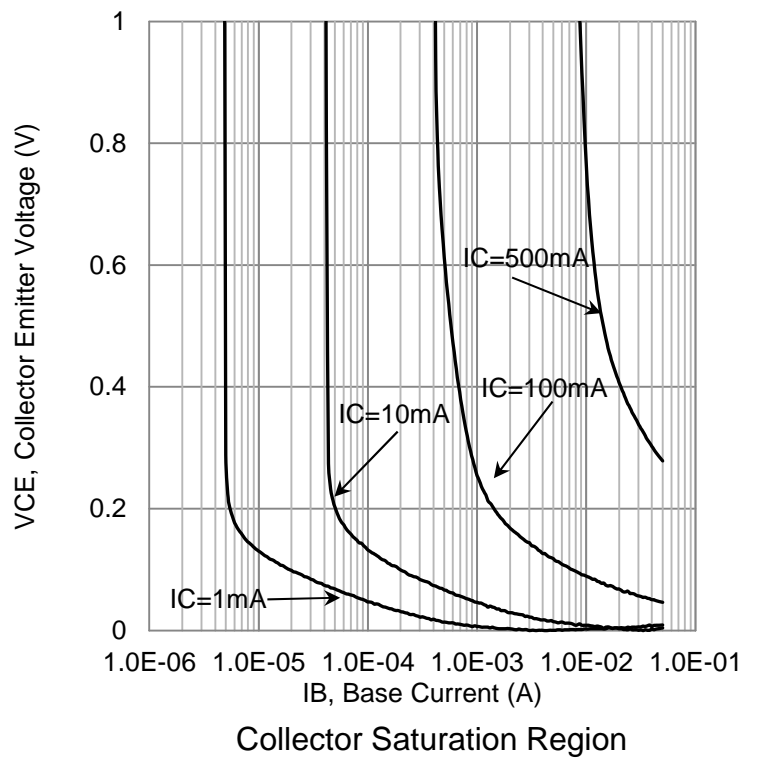
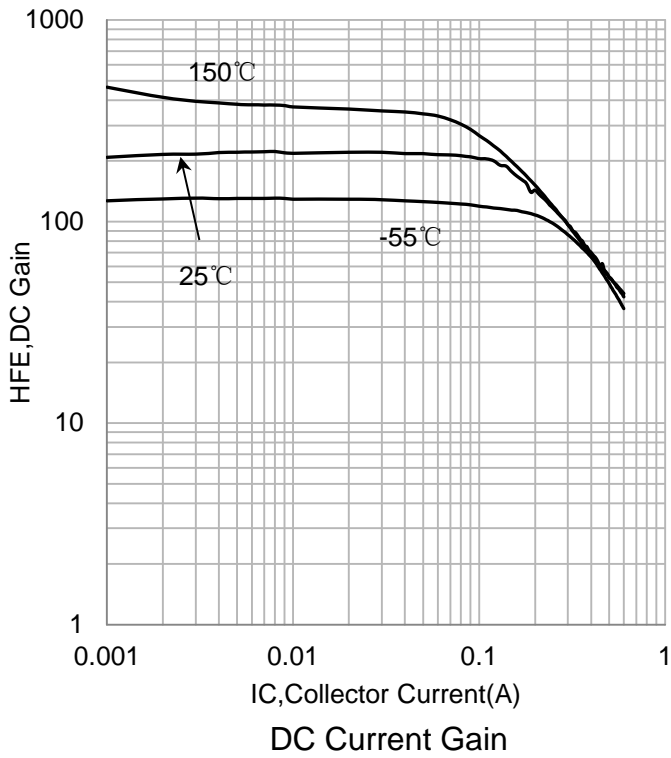
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

SWITCHING CHARACTERISTICS

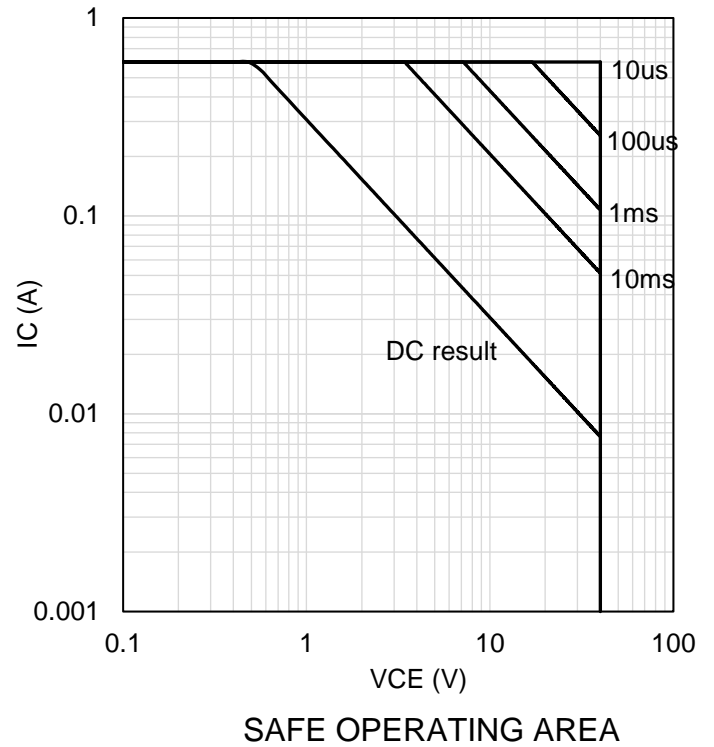
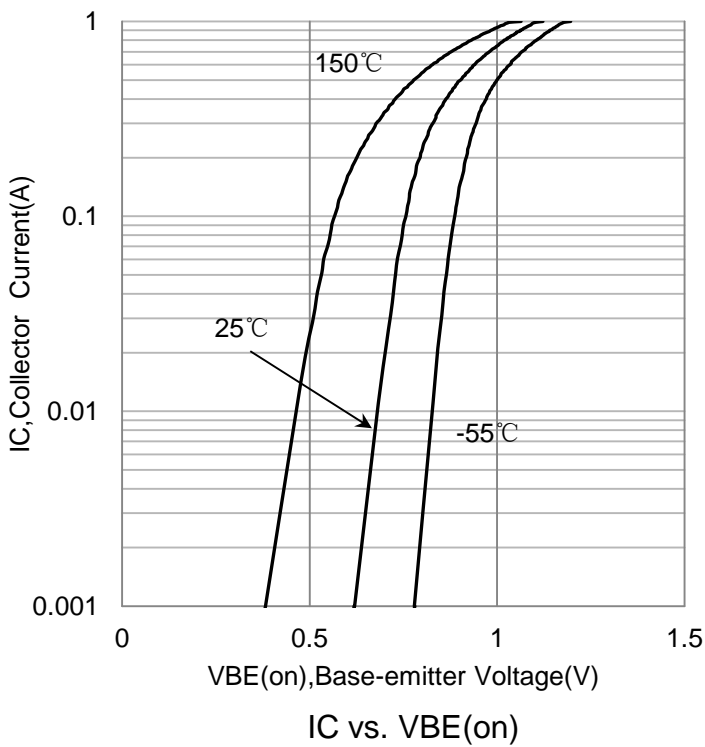
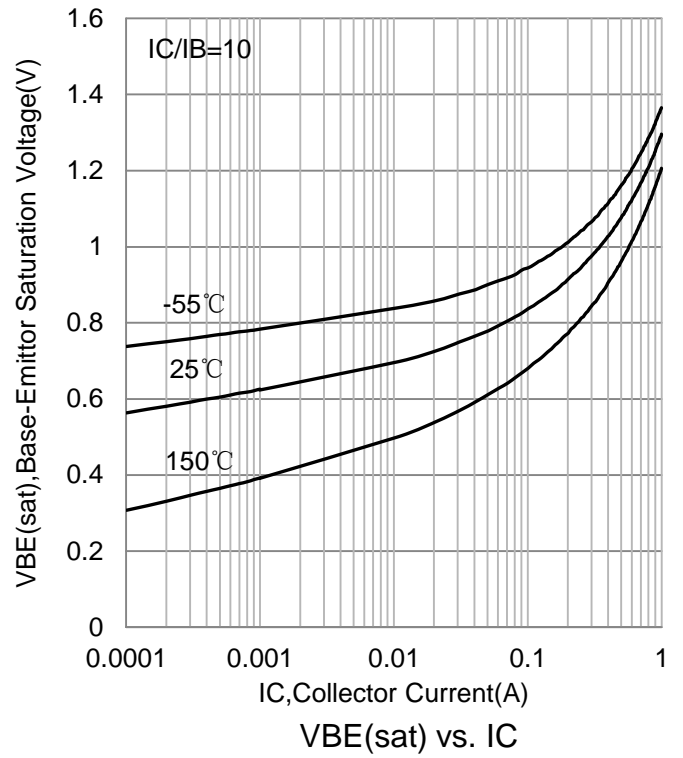
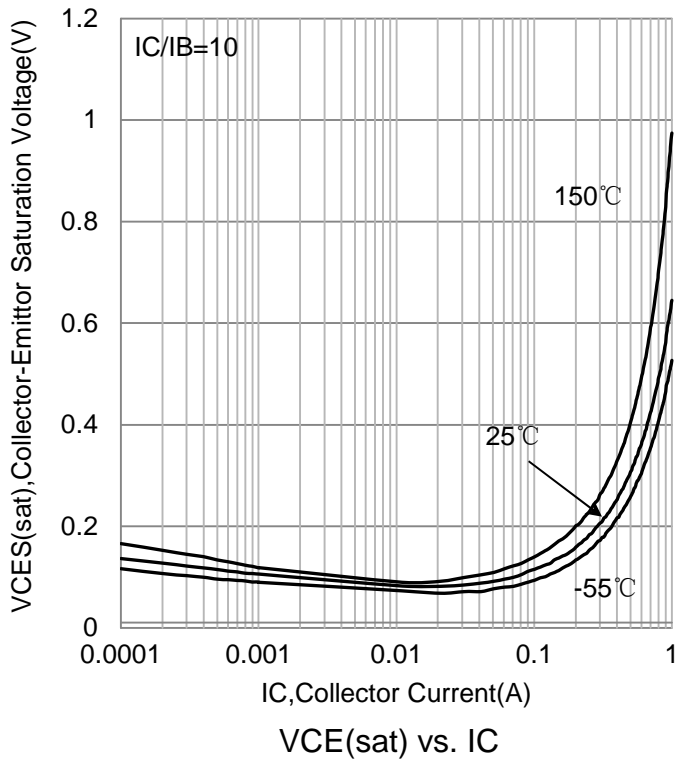
| | | | | | | |
|--------------|--|----|---|---|-----|----|
| Delay Time | (VCC = 30 V, VEB=2.0V, IC = 150 mA, IB1 = 15 mA) | td | - | - | 15 | ns |
| Rise Time | | tr | - | - | 20 | |
| Storage Time | (VCC = 30 V, IC =150 mA, IB1 = IB2 =15 mA) | ts | - | - | 225 | |
| Fall Time | | tf | - | - | 30 | |

2.Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$.

6. ELECTRICAL CHARACTERISTICS CURVES



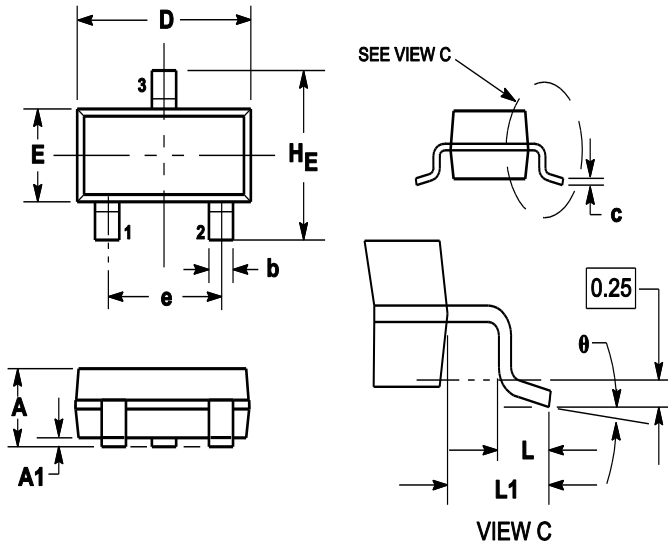
6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

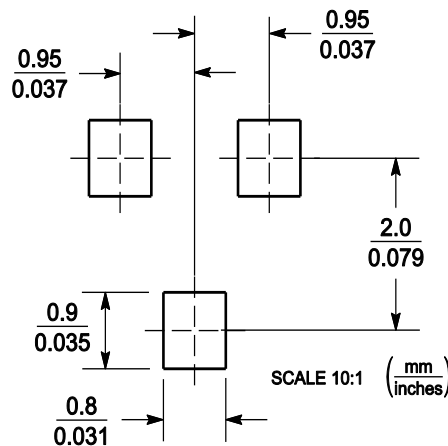
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



| DIM | MILLIMETERS | | | INCHES | | |
|-----|-------------|------|------|--------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.89 | 1 | 1.11 | 0.035 | 0.04 | 0.044 |
| A1 | 0.01 | 0.06 | 0.1 | 0.001 | 0.002 | 0.004 |
| b | 0.37 | 0.44 | 0.5 | 0.015 | 0.018 | 0.02 |
| c | 0.09 | 0.13 | 0.18 | 0.003 | 0.005 | 0.007 |
| D | 2.80 | 2.9 | 3.04 | 0.11 | 0.114 | 0.12 |
| E | 1.20 | 1.3 | 1.4 | 0.047 | 0.051 | 0.055 |
| e | 1.78 | 1.9 | 2.04 | 0.07 | 0.075 | 0.081 |
| L | 0.10 | 0.2 | 0.3 | 0.004 | 0.008 | 0.012 |
| L1 | 0.35 | 0.54 | 0.69 | 0.014 | 0.021 | 0.029 |
| HE | 2.10 | 2.4 | 2.64 | 0.083 | 0.094 | 0.104 |
| θ | 0° | --- | 10° | 0° | --- | 10° |

8. SOLDERING FOOTPRINT



单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)